

WHAT IS CLAIMED IS:

1. An image printing apparatus which prints an image in accordance with input printing data by a printhead having a plurality of printing elements, comprising:

5 a plurality of individual switches which are arranged for the respective printing elements;

a common switch which is arranged commonly to printing elements belonging to each of a plurality of groups of the printing elements; and

10 driving means for controlling said plurality of individual switches and said common switch and driving the printing elements in accordance with the input printing data,

wherein said individual switch is formed from a MOS transistor, and said common switch is formed from a  
15 high-breakdown-voltage MOS transistor having a higher breakdown voltage than a breakdown voltage of the MOS transistor for said individual switch.

2. The apparatus according to claim 1, wherein the printing elements, said plurality of individual switches,  
20 and said common switch are arranged on a single semiconductor substrate.

3. The apparatus according to claim 1, wherein the MOS transistor for said individual switch and the  
high-breakdown-voltage MOS transistor for said common  
25 switch are series-connected.

4. The apparatus according to claim 1, wherein the MOS transistor for said individual switch and the

high-breakdown-voltage MOS transistor for said common switch are formed from NMOS transistors.

5. The apparatus according to claim 1, wherein the printing element, the MOS transistor for said individual switch, and the high-breakdown-voltage MOS transistor for said common switch are sequentially arranged into a circuit from a power supply line side to ground.

6. The apparatus according to claim 1, wherein the MOS transistor for said individual switch includes a PMOS transistor, the high-breakdown-voltage MOS transistor for said common switch includes an NMOS transistors, and the MOS transistor for said individual switch, the printing element, and the high-breakdown-voltage MOS transistor for said common switch are sequentially arranged into a circuit from a power supply line side to ground.

7. The apparatus according to claim 1, wherein the printhead includes a printhead which discharges ink by using heat energy, and the image printing apparatus further comprises a thermal transducer for generating heat energy to be applied to ink.

8. A printhead which has a plurality of printing elements and is used in an image printing apparatus for printing an image in accordance with input printing data, comprising:  
a plurality of individual switches which are arranged for the respective printing elements;

a common switch which is arranged commonly to printing elements belonging to each of a plurality of groups of the

printing elements; and

signal reception means for, when receiving an individual switch operating signal for operating said plurality of individual switches or a common switch operating  
5 signal for operating said common switch, inputting the received signal to said individual switch or said common switch,

wherein said individual switch is formed from a MOS transistor, and said common switch is formed from a  
10 high-breakdown-voltage MOS transistor having a higher breakdown voltage than a breakdown voltage of the MOS transistor for said individual switch.

9. The printhead according to claim 8, wherein the printing elements, said plurality of individual switches,  
15 and said common switch are arranged on a single semiconductor substrate.

10. The printhead according to claim 8, wherein the MOS transistor for said individual switch and the  
high-breakdown-voltage MOS transistor are formed from NMOS  
20 transistors.

11. The printhead according to claim 8, wherein the printing element, the MOS transistor for said individual switch, and the high-breakdown-voltage MOS transistor for  
said common switch are sequentially arranged into a circuit  
25 from a power supply line side to ground.

12. The printhead according to claim 8, wherein the MOS transistor for said individual switch includes a PMOS

transistor, the high-breakdown-voltage MOS transistor includes an NMOS transistors, and the MOS transistor for said individual switch, the printing element, and the high-breakdown-voltage MOS transistor for said common  
5 switch are sequentially arranged into a circuit from a power supply line side to ground.

13. The printhead according to claim 8, wherein the printhead includes a printhead which discharges ink by using heat energy, and further comprises a thermal transducer for  
10 generating heat energy to be applied to ink.